

Work Order ID 158597

158597

Page 1

Monday, March 27, 2017 2:54:43 PM

Item ID: D350-636-011

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 4/7/2017 Req'd Qty: 1.00

1

Customer:

Reference: Scheduled

Approvals:

Process Plan: DAS

Date: JUL 29 2017

Tooling:

Date:

QC: 21

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2750-041	G

DAS
6
JUL 27 2017

100

Document Control

0.00

100

DC

DOCUMENT CONTROL

Memo

0.00

Doc.Control -USB or Paperwork

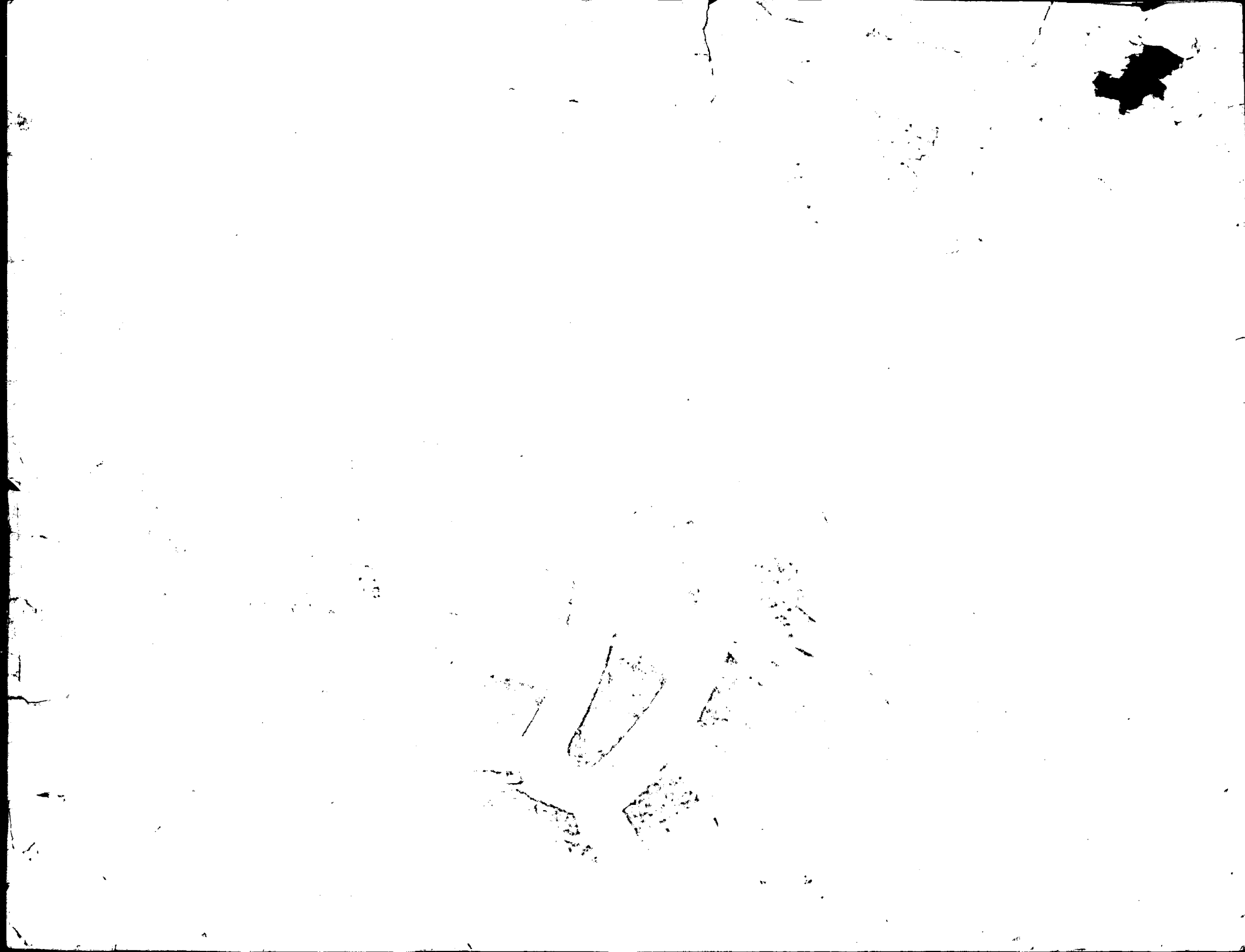
record fwd angle: 90°

Photocopy blue file and type labels per PPP D350-636-011 CHG 007

DAS
28
9-89

JUL 28 2017

B158597 LH



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Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00

110

Skidtubes

0.82

Skidtubes

Memo

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Start with 3/16", then open to 0.500" using center drill then ream holes using 0.500" reamer. PIN first side. Repeat process on second side.

ENSURE PROPER POSITIONING FWD BEND MUST BE FACING UP WHEN DRILLING FIRST SIDE

Drill pilot holes as per Dwg D2750 sheet 4 (D2750-1 details). Drill using drill Jig DT8150 & DT8863A for 2nd side only DT8863B for first side (detail B)

4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY AND RECORD FWD BEND ANGLE.

6- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".

7- Open up holes of Detail A to 0.297" (total of 2 holes per side)

8- Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004

1 MG6 17/03/29
DT17-03-30
DT

BE 17-03-30

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Run Start *NR1*

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

A/R Aluminum Rod batch: *MB6158*

9-Grind welds flush as per Dwg D2750

78617-23-30

120	QC10- Inspect visual per OSI004- ground welds	0.00				<u>1</u>			DAS 38 9-89
-----	---	------	--	--	--	----------	--	--	-------------------

120

QC

Quality Control

Memo

0.00

APR 04 2017

130	QC5- Inspect part completeness to step on W/O	0.00				<u>1</u>			DAS 38 9-89
-----	---	------	--	--	--	----------	--	--	-------------------

130

QC

Quality Control

Memo

0.02

APR 04 2017

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.70

Hand Finishing

(Y1)

~~0~~

201204104

BEB

150

QC7-Inspect Chemical Conversion Coat

0.00

150

QC

Memo

0.01

Quality Control

JW

17-04-04

Work Order ID 158597

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Run Start *NR1*

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Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160

0.00

160

Skidtubes

Skidtubes

1.08

Memo

1-Open up holes using hole saw of Detail C and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

2-Open up holes using hole saw of Detail B to 0.750" (total of 4 holes per side) as per dwg D2750.

3- Open float hole using un-bit to 0.500" (4 per side)

4-Chamfer holes of Detail B, C, ground handling and float holes per dwg D2750 (welding instructions on sheet 8)

5-Deburr and blow out all chips from inside of tube

6- Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per OSI 015, let cure for 12hrs.

A/R Sikaflex-291

batch: M136692

exp. date: 17-12-07

15:00

ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & OSI004 (welding instructions on sheet 8)

A/R Aluminum Rod

batch: M136658/136920

9- At section AJ-AJ drill out x-bolt spacer to 0.404"

05
7 BE 17-01-04

1 M66 17/04/09

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

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--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

10-Grind welds flush as per Dwg D2750

11-Spot face ground handling holes section (total of 4 places per side) as per dwg D2750

12-Deburr holes, ensure tube is free of all scratches before sending to paint.

170

QC10- Inspect visual per QSI004- ground welds 0.00

170

QC

Memo 0.00

Quality Control

17-04.06
DT.

DAS
38
9-88

APR 10 2017

180

QC5- Inspect part completeness to step on W/O 0.00

180

QC

Memo 0.02

Quality Control

VERIFY C'BOARD IS GOOD

DAS
38
9-88

APR 10 2017

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Run Start *NR1*

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Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

190

Pressure Wash per QSI005 4.3

0.00

190

HandFinish

Memo

0.44

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

(Kf) 2017/04/10
BEB.

200

0.00

200

SprayPaint

Memo

0.34

Spray Painting

1- PRIME AS PER DWG AND QSI 005 4.2
PRIMER PRC DESOTO 515X349 BATCH: 1378552- PAINT WHITE AS PER DWG AND QSI 005 4.2
PAINT BATCH: 137780

DAS
41
9-89
JUL 16 2017

210

QC14- Inspect Spray Paint

0.00

210

QC

Memo

0.00

Quality Control

Inspect for foreign object per QSI 024

LH f 200 12/02/20 DAS
15
9-89

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N900040100

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	HandFinishing	0.00							
230	HandFinish	1.32							
Hand Finishing	Memo								
	1- Install inserts as per Dwg D2750								
	2-Inspect for Foreign Objects								
	3- Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D2750								
	SIKA FLEX 241								
	BATCH: M133916								
	EXP DATE: 18103								
	4- Assemble o'ring to plug as per dwg D3492 and apply o'ring lube								
	A/R 55-o'ring lube batch: M135477								
	5- Coat all exposed fasteners with "LPS Procyon"								
	batch: M133690								
240	QC5- Inspect part completeness to step on W/O	0.00							
240	QC	0.02							
Quality Control	Memo								

12H of

M137797 18103

DAS
38
9-89
JUL 24 2017

1 LH of 11 12/02/20

RTU 590 M137797 18102

DAS
38
9-88
JUL 24 2017

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Reference:

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	Pick Kit	0.00							
250									
Packaging	Memo	0.01							
Packaging									
260	QC4- 100% Inspect kits for completeness	0.00							
260									
QC	Memo	0.03							
Quality Control	*****ensure antiseize is on AN8C21A bolts*****								
270		0.00							
270									
Packaging	Packaging								
Packaging	Memo	0.00							
Packaging	Package as per PPP D350-636-011								
	Location : FG072								

DAS
26
9-89

DAS
28
9-89

JUL 28 2017

DAS
28
9-89

JUL 28 2017

sold

Work Order ID 158597***158597***

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N900040100Setup Start ***NS1***

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Stop ***NS2***

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017 Start Qty: 1.00 ***1***

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21- Final Inspection - Work Order Release

0.00

280

QC

Memo

0.10

Quality Control

17/7/31 
 JUL 28 2017

Picklist Print

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Page 1

Work Order ID: 158597

158597

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:I 02.09.25 Rearranged procedure steps KJ
IPP Rev:J 06-03-23 As per Rev D JLM
IPP Rev:K 06-07.13 As per dsi9343 EC
IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC
IPP Rev:M 08-04-22 update steps 4, 13 DD verified by:EC
IPP Rev:N 08-09-23 revF as per dwg DD verified by:ec
IPP Rev:O 09-02-06 apply antiseize on AN8C21A bolts as per PAR09-010
DD verf:EC IPP Rev:P 10.06.22 revise
seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH
DD verf:EC IPP REV:R 13.08.27 PER ECN13-594 DD
VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3492-1		Manufactured	No			230	Each	12.0000	8	8			

D3492-1

Plug

all 12/07/20

Location

Loc Qty

Loc Code

FP001

12

B159290

x8

150701

7

154989

5

D3492-3

Manufactured No

230

Each

32.0000

8

8

D3492-3

Plug

all 12/07/20

Location

Loc Qty

Loc Code

FP001

32

B159296

x8

142869

3

153792

13

154987

16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

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Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0863J

Purchased

No

250

Each

324.0000

2

2

NAS1149D0863J

Washer

**

JUL 28 2017

DAS

31

9-89

Location

Loc Qty

Loc Code

FP001

46

125484

46

ST260a

100

125635

100

ST263

178

125268

178

NAS1611-010

Purchased

No

230

Each

141.0000

8

8

NAS1611-010

O-RING

**

12/02/20

Location

Loc Qty

Loc Code

FP001

137

m134955

7

m135603

8

m136182

21

m136295

1

m136836

100

Return2017

4

m136182

4

D2744

Manufactured

No

110

Each

23.0000

1

1

D2744

Cap

**

16-17-03-30

Location

Loc Qty

Loc Code

LG001

23

153496

10

154530

2

154984

11

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Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

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Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

D2600-3-BENT-LH

Manufactured No

110

Each

4.0000

1

1

D2600-3-BENT-1 H

Extrusion Bent LH

Location

Loc Qty

Loc Code

LG002

4

154980

4

160

Each

159.0000

8

8

D2743

Manufactured No

D2743

Crossbolt Spacer

Location

Loc Qty

Loc Code

LG001

159

153808

67

154180

14

155382

78

160

Each

5.0000

1

1

D2739

Manufactured No

D2739

350 I Beam

Location

Loc Qty

Loc Code

LG002

5

154075

5

160

Each

114.0000

4

4

D3490-3

Manufactured No

D3490-3

Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG001

114

137807

2

140801

1

153842

30

154995

81

DQA: _____ Date: _____



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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

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Work Order ID: 158597

158597

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

D3490-1

Manufactured No

160

Each

127.0000

4

4

D3490-1

Cross Bolt Spacer

06/17-04/04

Location

Loc Qty

Loc Code

LG

89

154992

89

LG001

38

134019

4

153841

34

ALS4-1032-225

AELS8-1032-225

Purchased

No

160

Each

3,990.000

38

38

ALS4-1032-225

Rivnut

all 12/03/20

Location

Loc Qty

Loc Code

CCK007

500

M136579

500

FG

28

M134975

20

M135998

8

FP001

3462

M135603

40

M135920

38

M135998

3349

M136265

35

D3793-3

Manufactured No

230

Each

7.0000

1

1

D3793-3

Wearplate Aft

all 12/03/20

Location

Loc Qty

Loc Code

FP002

7

154507

7

B154397?

x1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER :			
Misidentified ☐	☐	Past Due	☐				

Picklist Print

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Work Order ID: 158597

158597

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

AN8C35A

Purchased

No

230

Each

36.0000

1

1

AN8C35A

Bolt

**

all 12/02/20

Location

Loc Qty

Loc Code

FG

3

121275

3

FP001

33

m133336

1

m134130

1

m134133

14

m137055

17

X1

D3793-1

Manufactured

No

230

Each

11.0000

1

1

D3793-1

Wearplate Fwd

**

all 12/02/20

Location

Loc Qty

Loc Code

FP002

11

B159358

150194

1

154508

8

154982

2

~~B159353~~

X1

8

D3488-041

Manufactured

No

230

Each

5.0000

1

1

D3488-041

Blade Fitting LH

**

all 12/02/20

Location

Loc Qty

Loc Code

FP001

5

B159789

155360

5

X1

D3794-3

Manufactured

No

230

Each

7.0000

1

1

D3794-3

Gasket Aft

**

all 12/02/20

Location

Loc Qty

Loc Code

FP001

7

B159924

156348

7

X1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

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Work Order ID: 158597

158597

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

AN6C44A

Purchased

No

230

Each

472.0000

4

4

AN6C44A

Bolt

Handwritten signature

Location

Loc Qty

Loc Code

FP001

170

m132556

170

over009

250

m137055

250

ST333

52

m136658

52

MS21083C8

Purchased

No

230

Each

26.0000

1

1

MS21083C8

Nut

Handwritten signature

Location

Loc Qty

Loc Code

FP001

1

m136295

1

Return2017

2

m136442

2

ST297

23

m135470

1

m136442

4

m136648

18

D3536-25

Manufactured

No

230

Each

29.0000

1

1

D3536-25

Gasket Center

Handwritten signature

Location

Loc Qty

Loc Code

FG

6

87053

2

95328

4

FP001

23

146747

2

154979

21

Handwritten: M4137412

Handwritten: 13159362

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

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Work Order ID: 158597

158597

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

D3631-1

Manufactured No

230

Each

51.0000

8

8

D3631-1

Washer

all washers

Location

Loc Qty

Loc Code

FP001

51

B159502

147068

7

x2

153587

6

154434

38

D3791-1

Manufactured No

230

Each

8.0000

1

1

D3791-1

Wearpad

all wearplates

Location

Loc Qty

Loc Code

FP002

8

B158753

154375

4

x1

154985

4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

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Work Order ID: 158597

158597

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0332R

Purchased

No

230

Each

2,853.000

38

38

NAS1149C0332R

WASHER

ll 12/07/20

Location

Loc Qty

Loc Code

FP001

502

M137592

K38

m136042

438

m136741

46

m136975

18

GA

532

m133284

32

m136444

500

ST260a

1700

m135408

0

m135766

500

m135908

200

m136643

1000

ST266

119

m125654

42

m127831

66

m135466

11

D2745

Manufactured

No

230

Each

66.0000

8

8

D2745

Bushing

ll 12/07/20

Location

Loc Qty

Loc Code

FP001

66

154821

66

B159297

18

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 158597

158597

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

AN3C5A

Purchased

No

230

Each

673.0000

34

34

AN3C5A

Bolt

ll 12/03/20

Location

Loc Qty

Loc Code

FG

5

M137361

234

122800

5

OVER002

500

M136182

100

M136450

200

M136579

100

M137075

100

ST350

168

M134676

1

M135442

167

D3537-1

Manufactured

No

230

Each

81.0000

3

3

D3537-1

Wearpad

ll 12/03/20

Location

Loc Qty

Loc Code

FG

11

B161531

23

79833

1

88562

10

FP001

70

141922

7

147593

5

154226

1

154990

38

154991

19

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 158597

158597

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0832R

Purchased

No

230

Each

86.0000

1

1

NAS1149C0832R

Washer

all 12/10/17

Location

Loc Qty

Loc Code

FP001

82

m125807

2

m135536

80

Return2017

4

m135536

4

xl

AN3C6A

Purchased

No

230

Each

167.0000

4

4

AN3C6A

Bolt

all 12/10/17

Location

Loc Qty

Loc Code

FG

10

122416

10

FP001

16

m135704

12

m136295

4

xl

OVER002

121

m135442

36

m136781

85

ST350

20

m128704

18

m132767

2

NAS1611-013

Purchased

No

230

Each

66.0000

8

8

NAS1611-013

O-Ring

all 12/10/17

Location

Loc Qty

Loc Code

FP001

66

m134676

30

m136295

36

M137333

x2

Monday, March 27, 2017 2:54:43 PM

Shop Packet Print

Page 10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐					

Picklist Print

Page 11

Monday, March 27, 2017 2:54:43 PM

Work Order ID: 158597

158597

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

D3535-25

Manufactured No

230

Each

13.0000

1

1

D3535-25

Wearplate Center

all 12/02/17

Location

Loc Qty

Loc Code

FG

4

B159829

139987

1

✓

148669

1

95077

2

FP002

9

154529

1

154983

8

D3794-1

Manufactured No

230

Each

9.0000

1

1

D3794-1

Gasket Fwd

all 12/02/17

Location

Loc Qty

Loc Code

FP001

9

B159376

142770

1

✓

150417

2

155815

6

MS21043-6

Purchased No

230

Each

40.0000

4

4

MS21043-6

NUT

all 12/02/17

Location

Loc Qty

Loc Code

FG

20

M1137361

103693

20

x4

FP001

7

m135470

2

m136295

5

ST302

13

m136648

13

Picklist Print

Page 12

Monday, March 27, 2017 2:54:43 PM

Work Order ID: 158597

158597

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

D3493-1 Manufactured No

250 Each 50.0000 2 2

D3493-1

Washer

**

JUL 28 2017

DAS
26
9-89

Location

Loc Qty

Loc Code

FG 10
97201 10
ST037 40
154986 40

B159305 2

MS21083C8 Purchased No

250 Each 26.0000 2 2

MS21083C8

Nut

**

JUL 28 2017

DAS
26
9-89

Location

Loc Qty

Loc Code

FP001 1
m136295 1
Return2017 2
m136442 2
ST297 23
m135470 1
m136442 4
m136648 18

m137361 2

AN8C21A Purchased No

250 Each 43.0000 2 2

AN8C21A

Bolt

**

JUL 28 2017

DAS
26
9-89

Location

Loc Qty

Loc Code

FG 4
123966 2
m132169 2
ST332 39
m136262 1
m137005 38

B137162 x2

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Page 12

Picklist Print

Monday, March 27, 2017 2:54:43 PM

Work Order ID: 158597

158597

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017

Required Date: 4/7/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1515H3L

Purchased

No

230

Each

95.0000

4

4

***NAS1515H3L ***

all washed

Washer

Location

Loc Qty

Loc Code

FG

40

M137361

2d

102472

40

FP001

51

m127831

20

m134508

3

m135600

2

m136263

26

ST266

4

m130726

4

D2741

Manufactured

No

250

Each

24.0000

1

1

D2741

Replacement Blade

Location

Loc Qty

Loc Code

FG

10

131616

10

B158915

1

ST538

14

132981

14

D3532-1

Manufactured

No

250

Each

15.0000

2

2

D3532-1

Spacer

Location

Loc Qty

Loc Code

ST038

15

153825

5

154372

10

B159312 2

JUL 28 2017

DAS
26
9-89

DAS
26
9-89

JUL 28 2017

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
			1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AFLS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN8C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

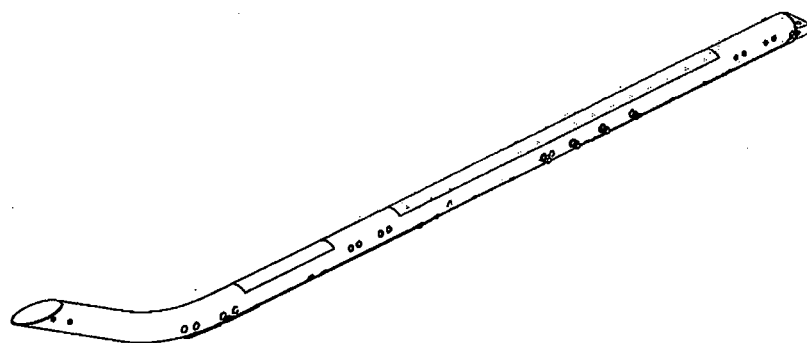
GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2
OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
FINISH WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

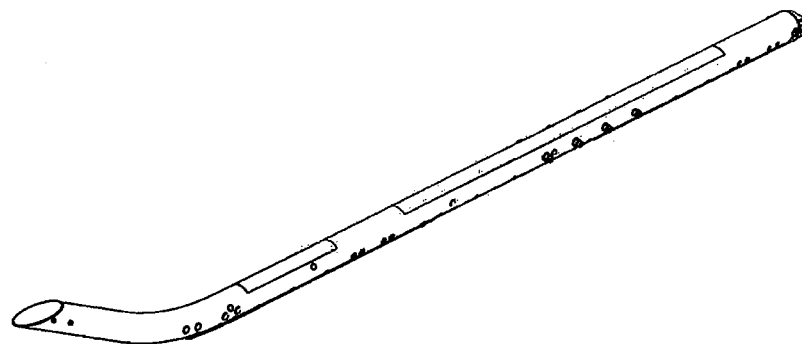
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 158597 MW
1703-28

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2013-08-13
WD

G	CORRECTED TOLERANCE ON $\phi 0.500$ THRU HOLE: IS $+0.010/-0.000$, WAS $+0.100/-0.000$ (ZN B3-4, B2-5); ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-1-4/5-6-7); UPDATED FINISH OPTIONS, INSIDE OF TUBE NO LONGER SPRAYED WITH LPS-3. REASON: PAR13-276 AND NCR13-2757	MB	13.07.11
F	INCORPORATE DSI 9413: QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	MM		
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	13.07.11		
DART AEROSPACE USA, INC. KENT, WA			
DRAWING NO. D2750		REV. G	
TITLE 350 SKIDTUBE ASSEMBLY		SHEET 1 OF 11	
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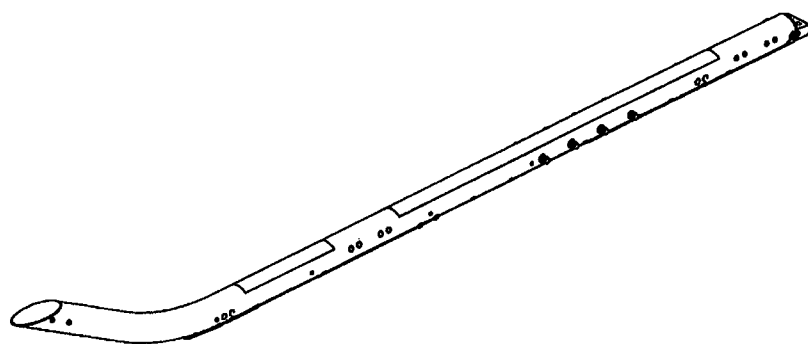
D2750-041 350 SKIDTUBE ASSEMBLY, LH



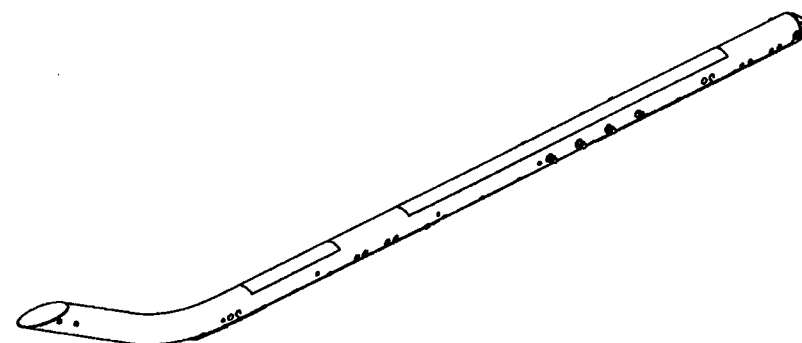
D2750-042 350 SKIDTUBE ASSEMBLY, RH

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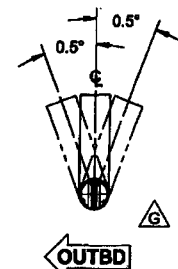
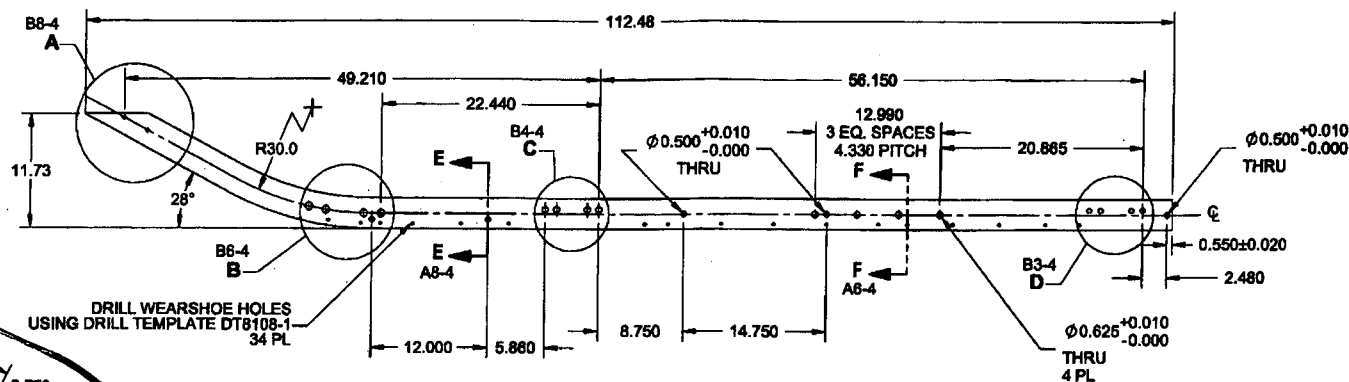
D2750-043 350 SKIDTUBE ASSEMBLY, LH



D2750-044 350 SKIDTUBE ASSEMBLY, RH

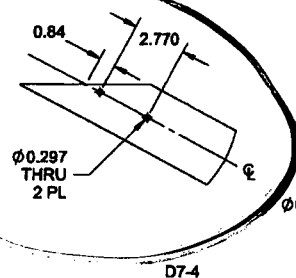
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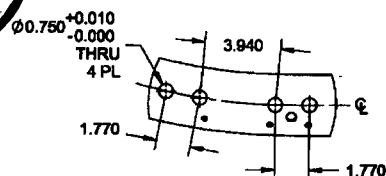


MAX ALLOWABLE
TWIST ON FWD BEND
(VIEWED LOOKING FWD)

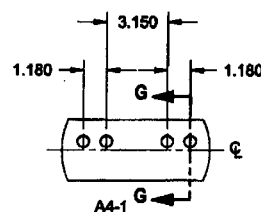
D2750-1 LH SKIDTUBE



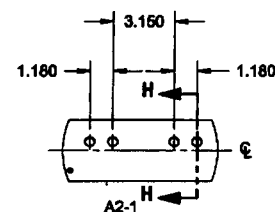
DETAIL A
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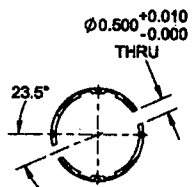
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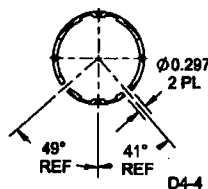
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SCALE 2X



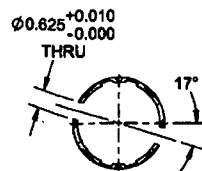
DETAIL D
SCALE 2X



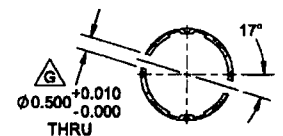
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



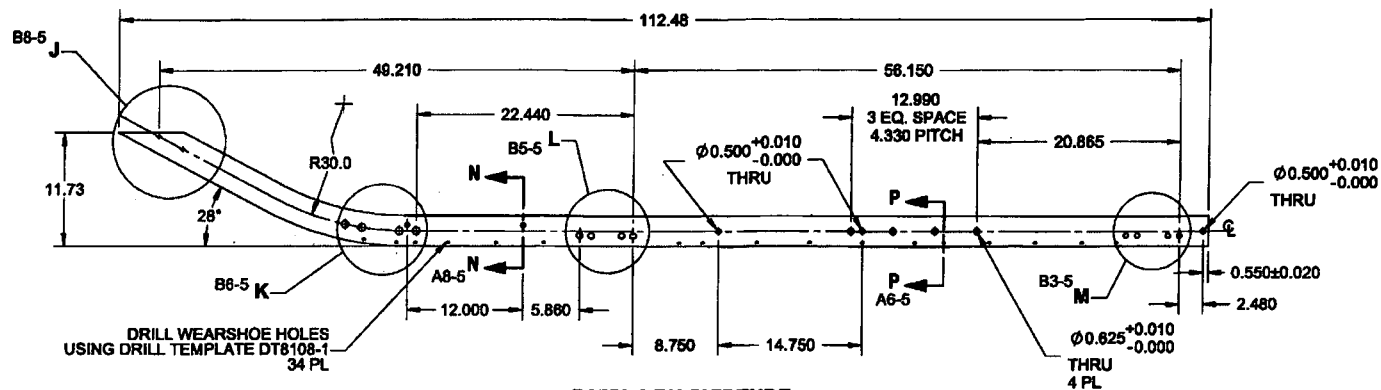
SECTION G-G
SCALE 3X, 4 PL



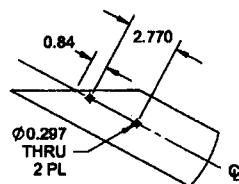
SECTION H-H
SCALE 3X, 4 PL

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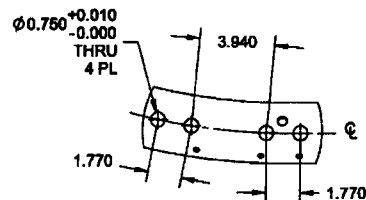
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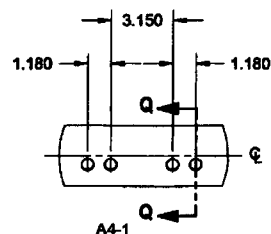
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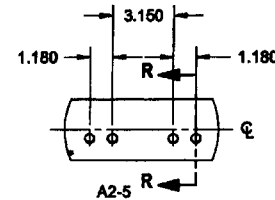
D8-5
DETAIL J
SCALE 2X



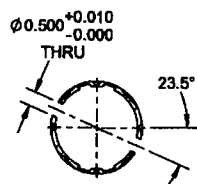
C7-5
DETAIL K
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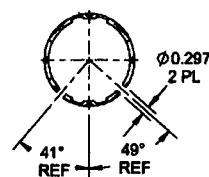
D8-5
DETAIL L
SCALE 2X



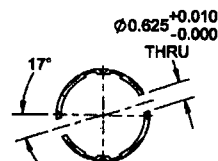
C3-5
DETAIL M
SCALE 2X



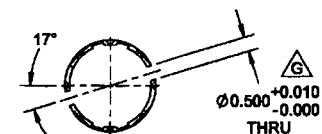
C6-5
SECTION N-N
SCALE 3X, 2 PL



C4-5
SECTION P-P
SCALE 3X, 17 PL



B5-5
SECTION Q-Q
SCALE 3X, 4 PL



B3-5
SECTION R-R
SCALE 3X, 4 PL

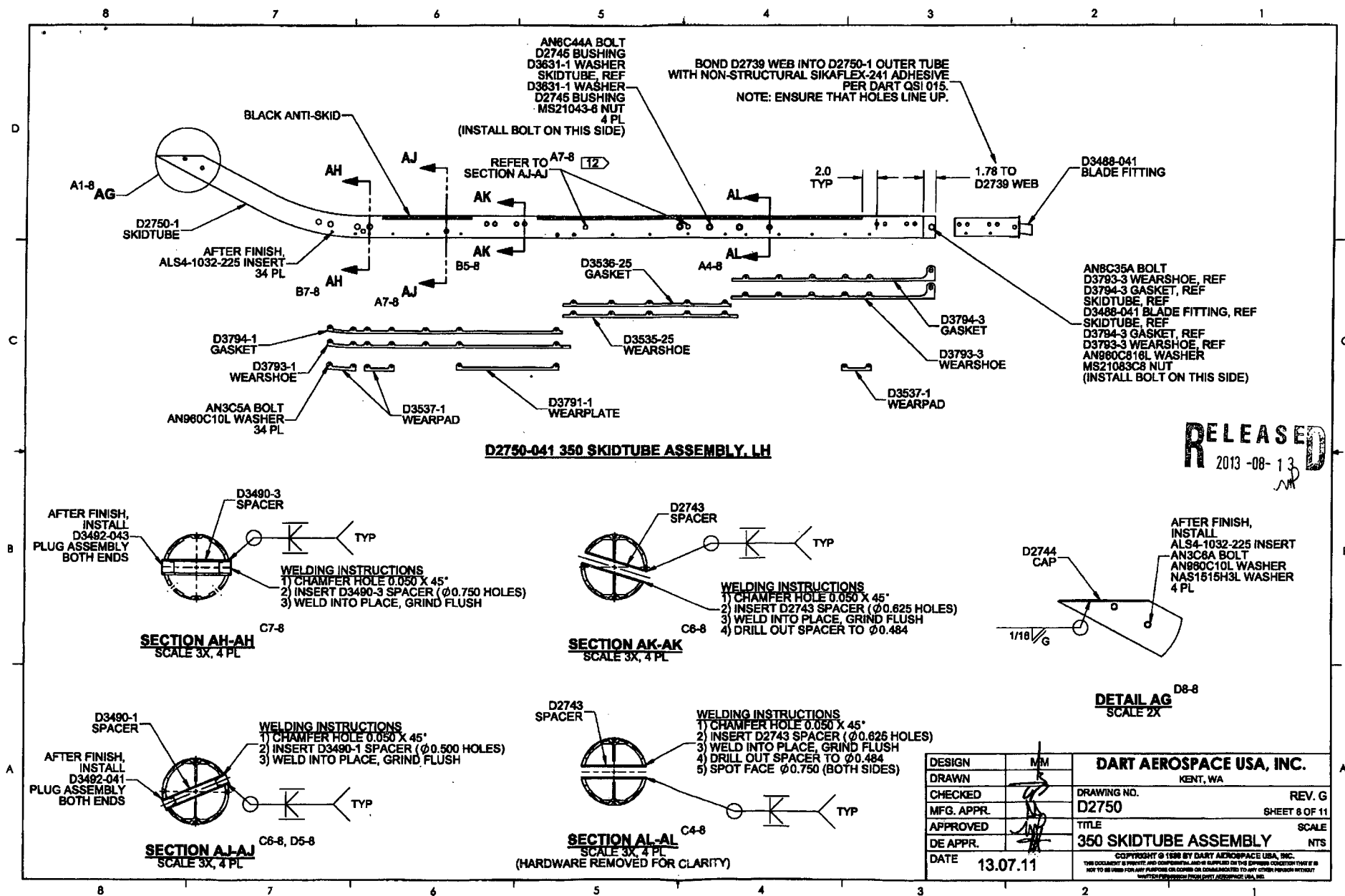
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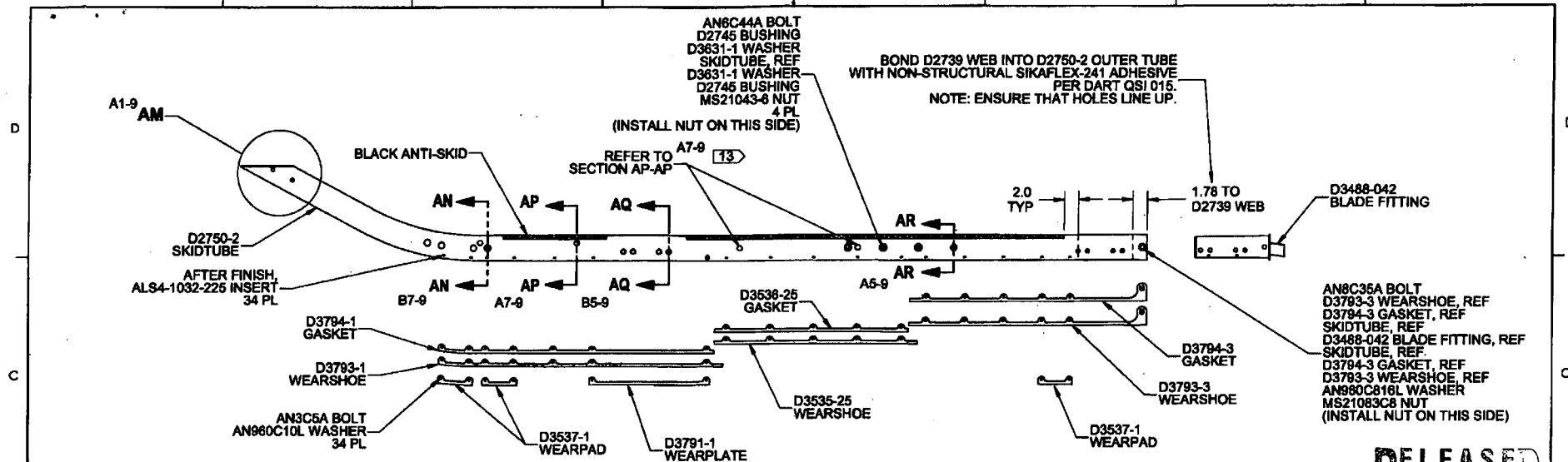
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2013-08-13



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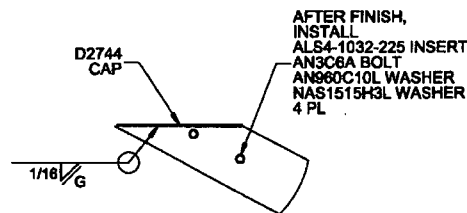
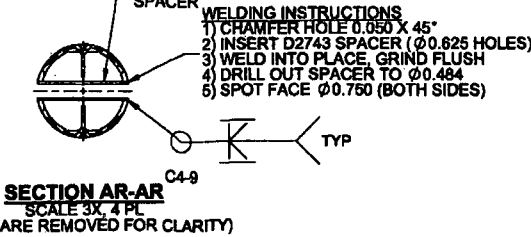
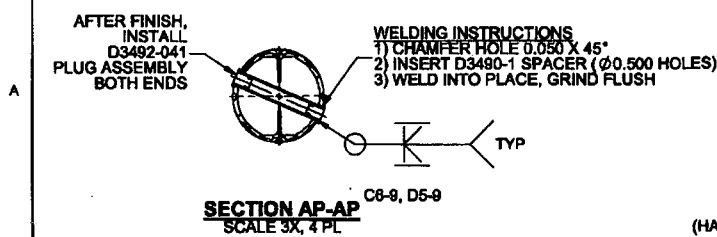
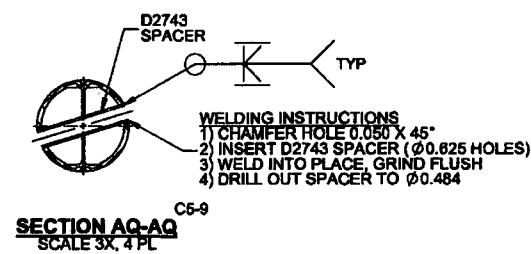
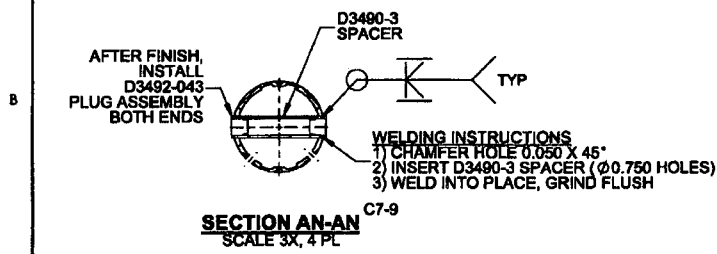
DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN		KENT, WA	
CHECKED		DRAWING NO.	REV. G
MFG. APPR.		D2750	SHEET 8 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	13.07.11	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR DISCLOSED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1



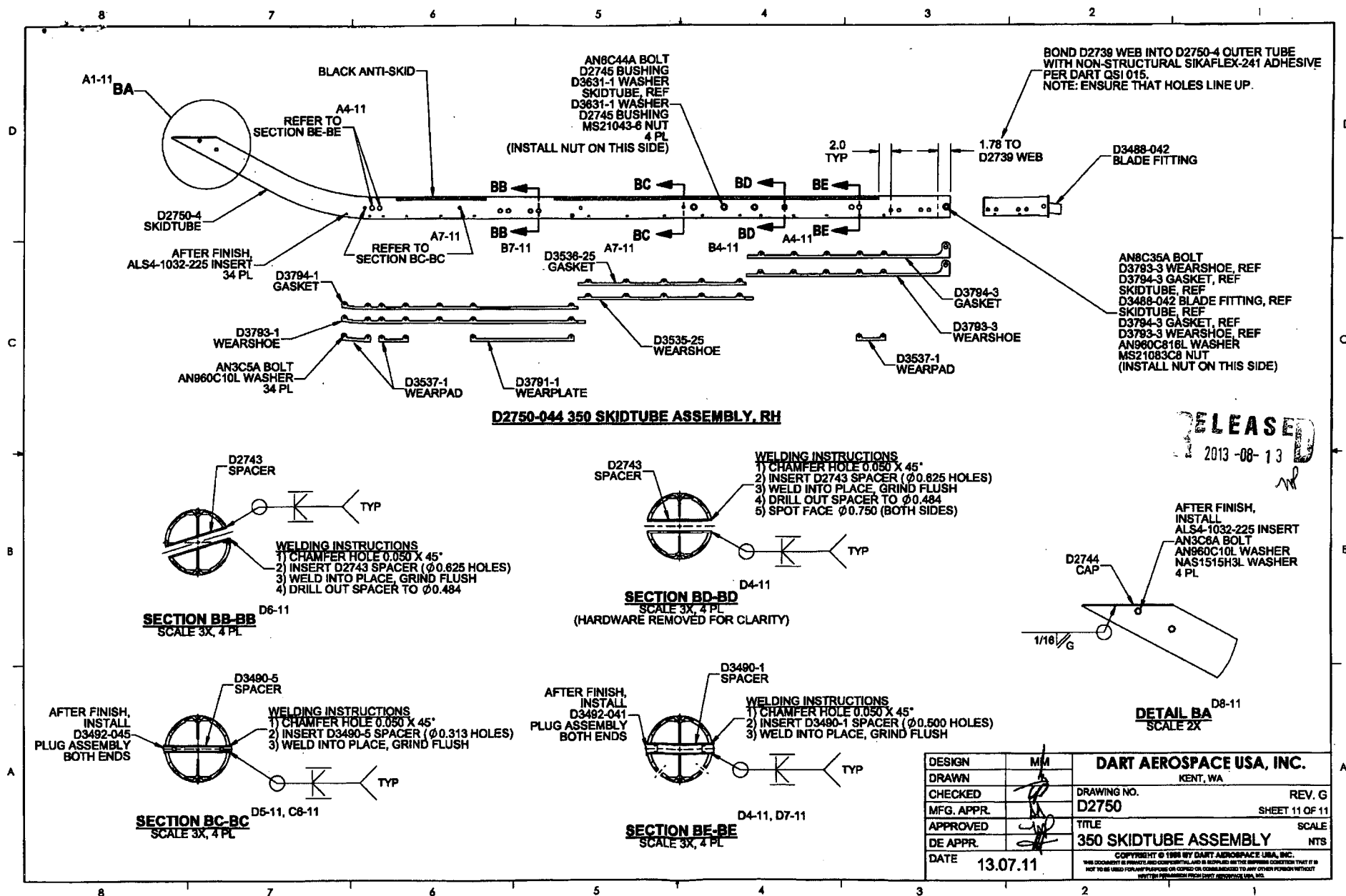
D2750-042 350 SKIDTUBE ASSEMBLY, RH

RELEASED
2013-08-13



DESIGN	NM	DART AEROSPACE USA, INC.	
DRAWN		KENT, WA	
CHECKED		DRAWING NO. D2750	REV. G
MFG. APPR.		SHEET 9 OF 11	
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	
DATE	13.07.11	NTS	

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Work Order ID 158597
Monday, March 27, 2017 2:54:43 PM

Item ID: D350-636-011

Revision ID:

Item Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.

Start Date: 3/29/2017 Start Qty: 1.00

Required Date: 4/7/2017 Req'd Qty: 1.00

Reference: Scheduled

Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	-----------	------------	------------	---------------	-------------

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours
--------------------------------	--------------------------	----------------------

Draw Nbr	Revision Nbr
D2750-041	G

100

1000

DC
Doc.Control -USB or Paperwork

Document Control
DOCUMENT CONTROL

Memo
record fwd angle: 90°

Photocopy blue file and type labels per PPP D350-636-011 CHG 007

DAS
5
9-89

JUL 28 2017

1 19-03-17

United States of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SR00646SE

This certificate, issued to

Dart Aerospace USA, Inc.
190 S. Danebo Ave.
Eugene, OR 97402

*certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part * of the * Regulations.*

Original Product—Type Certificate Number:

Make:

Model:

* See attached Federal Aviation Administration (FAA) Approved Model List (AML) SR00646SE for approved aircraft models and applicable airworthiness regulations

Description of the Type Design Change: Replacement of the original landing gear skid tubes with DART D350-636 skid tube system components as appropriate. The D350-636 skid tube system must be fabricated in accordance with DART Aerospace USA, Inc. Master Document List (MDL) No. MDL-D350-636, Revision N, dated September 01, 2010, or later Federal Aviation Administration (FAA) approved Revision. The skid tubes must be installed in accordance with DART Aerospace Installation Instructions No. INN-D350-636, Revision H, dated July 26, 2010, or later FAA accepted revision. This modification must be maintained in accordance with DART Aerospace Instructions for Continued Airworthiness (ICA) No. ICA-D350-636, Revision 1, or later FAA-approved revision.

Limitations and Conditions: Approval of this change in type design applies to rotorcraft listed on the Approved Model List (AML) only. This approve should not be extended to other rotorcraft of these models on which other previously approved modification are incorporated unless it is determined by the installer that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of the rotorcraft.

A copy of this Certificate, AML No. SR00646SE, and the ICA must be maintained as part of the permanent records for the modified rotorcraft.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: April 24, 1998

Date reissued: October 28, 2015

Date of issuance: November 19, 1998

Date amended: September 27, 2010



By direction of the Administrator

Andrew Brown
(Signature)

Manager, Seattle Aircraft Certification Office
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.